UNIVERSITY OF CALIFORNIA

VIRUS LABORATORY
BERKELEY 4, CALIFORNIA

October 20, 1955

Dr. Rosalind Franklin
Birkbeck College Crystallography Laboratory
University of London
21 Torrington Square, W.C. 1
London, England

Dear Dr. Franklin:

Thank you for your letter of September 15. I have been busy preparing and analysing samples which might be of interest to you. I believe that sample # 230X represents a better mercury derivative (denaturation having been more successfully prevented in the course of preparation) than the earlier preparation. It contains 0.99% Hg (1/20000).

I have also attempted introduction of limited amounts of iodine on the tyrosine groups. Preparation 228IIB is iodinated 230X. The mercury blocks the -SH group and all the iodine (about one per 18000) is on one (or several) phenolic groups. Preparation 228IIC is TMV into which 2 iodine atoms were introduced (per 18,000),--one on the -SH group and one on tyrosine.

Your other request was mercuri-TMV protein. We have prepared small samples at various times, but have not yet investigated to what extent this material aggregates to rods of what length, and at what pH. Also we always have so many uses for good protein fractions that we never have much to spare. I will send you about 15 mg as a pellet (235A) obtained from protein + methylmercuric nitrate after adjustment to pH 5.5. The same limitation in regard to amounts holds for the reconstituted virus which you expressed an interest in when writing to Dr. Williams. We are making so many small samples (1-3mg) in combining different preparations of nucleic acid, different strain proteins and nucleic acids, etc. that we have not had enough materials for a "preparative" experiment, followed by centrifugal separation of bigger rods from smaller stuff. If you definitely believe that this material would be of interest to you, please let me know how much you need, and I will try and prepare it for you.

With best regards,

Sincerely yours,

Heinz Fraenkel-Conrat

H. Fraenkel-Conrat

HFC:ma